

defined intervals. When cut upon, the same kind of sound was produced as upon the division of muscles that have been slightly frozen. When the muscles were pressed before a light, there was a sparkling and cracking like that which is caused by squeezing out the essential oil from orange-peel before a taper. Upon opening the head, the cerebrum powerfully raised the dura mater: and wherever this membrane was divided, a hernia cerebri occurred. The brain was light, and when an incision was made into its substance, a slight noise was heard, similar to that from the section of the muscular tissue; but, upon pressing portions of the cerebral substance before a bougie, neither crackings nor sparks were produced. No gas in the cavities of the heart. In the right auricle and ventricle were two coagula; the largest was in the ventricle, and its size was about that of a filbert. This coagulum was emphysematous; for upon being brought into contact with a light, and pressed, sparks were emitted and a crackling noise. The blood-vessels were empty. The small transparent veins appeared to contain the same gas. The abdomen was slightly tympanitic, and upon being punctured, and a light brought near, a clear and bluish smoke was seen, and the puncture was slightly enlarged by the combustion of its edges, which were also blackened. The small intestines contained a very trifling quantity of pus.

It is to be regretted that an accident happened to a vessel in which some of the gas was set aside, for the purpose of ascertaining its precise nature.

This case certainly merits the attention of physiologists, if it were only on account of the presence of the inflammable gas; and those physicians who have thought that spontaneous combustion depended upon inflammable gas being developed in the cellular tissue will here find some support to their theory.—*Gaz. Méd. Tom. III. No. 103.*

MATERIA MEDICA.

16. *Experiments on Hemlock and Henbane.*—Professor GEIGER, of Heidelberg, whilst recently engaged in making chemical experiments, succeeded in establishing some remarkable illustrations of the active principle of hemlock. Its base is an organic salt, which opens an entirely novel series of these highly interesting organic substances, for it is volatile, and similar to a volatile oil. The peculiar qualities of this substance, both intrinsically, and when brought into combination with acids, its rapidly changeable character, and the brilliant play of colours which it exhibits whilst undergoing change, render it one of the most interesting productions in organic chemistry. Its poison is of the deadliest description. The smallest quantity, applied inwardly, produces paralysis; and one or two grains are sufficient to kill the largest animal. Another of Professor Geiger's late discoveries is the active principle of henbane, (*atropin*;) its base is likewise an organic salt, but it is tenacious, admits of being reduced to a crystal, forms a crystalline salt with acids, like hemlock, and has a disagreeable smell, though it is not volatile, unless it be subjected to decomposition. Its poison is quite as deadly as that of the former, but exhibits dissimilar appearances, and is not so rapid in its effects. Animals, where even a minute dose is administered, become languid, cannot stand upon their legs, are attacked by convulsions, and die within six hours. The effect of this poison in dilating the pupil of the eye, is extremely remarkable. The minutest portion of it, when applied to the eye of a cat, produces a dilatation of the pupil for the next four and twenty hours; and the hundredth part of a grain prolongs the appearance for the next seven or eight days, besides inducing other singular symptoms of poisoning.—*Rep. Pat. Invent. Murch, 1833.*

17. *Constituents of Opium.*—M. PELLETIER in an elaborate memoir on opium printed in the *Annales de Chimie*, mentions the following principles as contained

in opium; viz. narcotine, morphia, meconic acid, meconine, narceine, caoutchouc, gum, bassorine, lignin, resin, brown acid and extractive matter, fixed oil, and a volatile but non-oleaginous principle, which rises in distillation with water.

Added to these substances, M. Hebert announces, (*Journal de Pharmacie*, April, 1852,) another peculiar principle: it is bitter, crystallizable, forms salts with acids, especially with acetic acid, with which it gives crystals in the form of very white scales, and with sulphuric acid white silky crystals;—no name is given to this substance by its discoverer.

M. Robiquet, it also appears, has separated a new alkali from opium, which he calls *paverin*. Only a few details of its properties are as yet given, (*Journal de Pharm.* Nov. 1882. It differs very remarkably from other vegeeto-alkalies in being soluble in water. It saturates acids, is insoluble in potash, and contains much azote; it is very poisonous, and acts very particularly on the spinal marrow.—*Ibid.*

18. *Hydrosulphuret of Ammonia*.—It is stated by Mr. Newton in the 2d Vol. of the *Dublin Journal of Medical and Chemical Science*, that he and Dr. Marsh had found the hydrosulphuret of ammonia to possess a powerful effect in lessening the pulse. Dr. Graves has been led from this representation to try the remedy in several cases, some of hypertrophy, with increased action of the heart, in others the heart's action was natural. The remedy was increased to twenty-five or thirty drops four times a day largely diluted. But he says that "in no one instance did it exert the slightest effect upon the heart's action on the pulse."—*Dub. Journ.*

19. *Influence of Vinegar in Lessening the Urinary Secretion*.—MR. JOHN DALTON in a course of experiments for comparing the quantity of food taken, with that of the different secretions, found on one day a great defalcation in the amount of urine which he passed, and for which he could discover no cause, unless his having taken at dinner time a tea-spoonful or two of vinegar, could account for it. To be satisfied of this, he took some days after, an ounce of vinegar in four equal portions during one day; and the effect was a very great diminution of urine on that day, amounting to fifteen ounces less than the average quantity, (48½ oz.) Mr. D. says that there did not appear to be any increased effect in any other secretion, as a compensation for this diminution.—*Memoirs of the Lit. and Philosophical Society of Manchester*, Vol. V. N. S. 1831.

PRACTICE OF MEDICINE.

20. *Cold Dash in Convulsions of Infants*.—The application of a small stream of ice-cold water to the head, is recommended by Richter in his *Specielle Therapie*, as very successful both in the convulsions and coma of hydrocephalus. This practice is also pursued by Dr. Heim, of Berlin, and repeated so long as the fits of insensibility continue. The neck and shoulders ought to be covered with oiled silk, and the body kept warm. Dr. Graves, of Dublin, recommends a similar practice.—*Dub. Journ.*

21. *Cases of Obstinate Constipation successfully treated*.—By J. PIERCE, M. D. Case I.—S. B. a female, age thirty-five, of the highly nervous temperament, who had suffered severely from spinal irritation, stated that her bowels had been confined for five days; that she had taken aloetic pills, senna and salts, and castor oil, without effect; and that she experienced a sense of fulness in the abdomen, with pain and tenderness, increased by pressure at the sigmoid flexure of the colon. Finding that active purgatives of every kind, whether saline or drastic, not only failed to operate, but aggravated the pain and tenderness; that